



UNITED STATES PATENT AND TRADEMARK OFFICE

ck

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/932,254

08/16/2001

Lu Liu

0162.210US

3106

27310

7590

04/20/2006

PIONEER HI-BRED INTERNATIONAL, INC.

7250 N.W. 62ND AVENUE

P.O. BOX 552

JOHNSTON, IA 50131-0552

EXAMINER

VOGEL, NANCY S

ART UNIT

PAPER NUMBER

1636

DATE MAILED: 04/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/932,254	LIU ET AL.	
	Examiner	Art Unit	
	Nancy T. Vogel	1636	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-105 is/are pending in the application.
- 4a) Of the above claim(s) 7,9,10,21-31,40,42-79,81 and 96-104 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 11-20, 32-39, 41, 80, 82-95 and 105 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-105 are pending in the case.

Election/Restrictions

Claims 7, 9, 10, 21-31, 40, 42-79, 81, and 96-104 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 5/31/05.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

Claims 1, 2, 12, 13 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Affhotler et al. (WO 98/36080) (cited as CF on Information Disclosure Statement filed 12/12/01).

Claims 1, 2, 4, 11-14, 16-20, are rejected under 35 U.S.C. 102(b) as being anticipated by Gilbert et al. (WO 99/31224-A, listed as Cite. No. 1 on Information Disclosure Statement submitted 3/26/03).

Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Nixon et al. (Tibtech 1998, 16:258-264, cited on Information Disclosure Statement filed 3/14/02).

Claims 1, 4, 11, 19, 20, 32-38, 80, 82, 83, 86, 94 and 95 are rejected under 35 U.S.C. 102(e) as being anticipated by Coruzzi et al. (US Patent 6,864,405).

Claims 1-5, 11-14, 16, 19 and 20 are rejected under 35 U.S.C. 102(a) as being anticipated by Peoples (WO 00 06747, cited on Information Disclosure Statement filed 3/14/02).

Claims 1, 2, 12-15, 19, 20, 32-35, 38, 80, 83, 87-90, 94, 95 are rejected under 35 U.S.C. 102(b) as being anticipated by Rose et al. (US Patent 5,861,277).

Each of the above rejections made under 35 USC 102 is maintained essentially for the reasons made of record in the previous Office action, mailed 7/27/05. Applicant's arguments filed 1/27/06 have been considered but have not been found convincing.

Applicants have addressed all of these rejections together at page 18 of the response. Applicants have set forth case law which states that each and every element of the claimed invention must be disclosed in the reference. Applicants state that none of the disclosures cited teach all claim limitations and none anticipate the currently claimed subject matter of the invention. However, applicants do not set forth support for this assertion, which would point out specific elements of the invention that are not disclosed in the cited references. Therefore, the rejections are maintained.

Claim Rejections - 35 USC § 103

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peoples et al. (WO 00 06747) in view of Minshull et al. (WO 97/35966) (cited as BS on Information disclosure Statement submitted 12/12/01).

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bulow et al. (Trends in Biotech. 9:226-231, 1991) in view of Goller et al. (FEMS Micro. Lett. 161 293-300, 1998), Lous et al. (Microbiology, 143:1141-1149, 1997), Nakayama et al. (Plant Physiol. 122, 1239-1247, 2000).

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gilbert et al. (WO 99/31224) in view of Rose et al. (US Patent 5,861,277).

Claims 84 and 85 are rejected under 35 U.S.C. 102(e) as being anticipated by Coruzzi et al. (US Patent 6,864,405) or Rose et al. (US Patent 5,861,277) in view of Minshull et al. (WO 97/35966) (cited as BS on Information disclosure Statement submitted 12/12/01).

Claims 92 and 93 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coruzzi et al. (US Patent 6,864,405) or Rose et al. (US Patent 5,861,277) in view of Gilbert et al. (WO 99/31224-A).

Each of the above rejections under 35 USC 103(a) is maintained essentially for the reasons made of record in the previous Office action, mailed 7/27/05. Applicant's arguments filed 1/27/06 have been considered but have not been found convincing.

Applicants have addressed all of these rejections together at pages 23-24 of the response. Applicants have argued that In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Applicants have not pointed to any specific instance where the Examiner uses piecemeal analysis, unsupported by a motivation to combine the references. Rather, they assert that such a motivation is missing from the analysis. However, for the reasons made of record in the previous Office action, it is maintained that there was adequate motivation to combine the references, and the invention as claimed would have been obvious to one of ordinary skill in the art. Therefore, the rejection is maintained.

Claim Rejections - 35 USC § 112

Claims 8, 41 and 105 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter

which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicants have responded to this rejection at pages 26-27 by stating that “Applicants submit that the knowledge and level of skill in the art would allow a person of ordinary skill in the art to envision the claimed invention, namely the enzymatic domains from diaminobutyric acid aminotransferase, diamino butyric acid acetyltransferase and ectoine synthase, all chemical structures well known in the art” and further “Claims 8, 41 and 105 recite that the claimed method utilizes at least two enzymatic domains from diaminobutyric acid aminotransferase, diaminobutyric acid acetyltransferase and ectoine synthase, thereby providing a functional characterization of the compounds claimed in the genus”. However, there is no support for the first quoted section above, regarding the knowledge in the art of the genus as broadly claimed. Further, while it is agreed that the claims recite enzymatic domains from the recited enzymes, as was previously stated in the original rejection, the specification teaches the structures of only particular species of these enzymes which are isolated from the eubacteria *H. elongate*, and *M. halophilus* (page 60). The specification fails to describe any other representative species by any identifying characteristics or properties other than the functionality of being a diaminobutyric acid aminotransferase, a diaminobutyric acid acetyltransferase, or a ectoine synthase. Given this lack of description of representative species encompassed by the genus of the claim, the specification fails to sufficiently describe the claimed invention in such full, clear,

concise and exact terms that a skilled artisan would recognize that applicants were in possession of the claimed invention. Applicants have not specifically addressed these arguments in their response. Therefore the rejection is maintained.

Conclusion

No claims are allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nancy T. Vogel whose telephone number is (571) 272-0780. The examiner can normally be reached on 7:00 - 3:30, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Irem Yucel, Ph.D. can be reached on (571) 272-0781. The fax phone

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

N. Vogel
4/10/06


NANCY VOGEL
PRIMARY EXAMINER